1.0 PURPOSE AND NEED

The National Environmental Policy Act of 1969 (NEPA) requires federal agencies to prepare an Environmental Impact Statement (EIS) for a major federal action that will significantly affect the quality of human health and the environment. The proposed action and alternatives evaluated in this Draft EIS (DEIS) are considered to constitute a major federal action because they include federal funding. The Federal Highway Administration (FHWA) is the lead federal agency with primary responsibility for the DEIS. The Utah Department of Transportation (UDOT) and the Navajo Nation are joint lead agencies with FHWA and UDOT is the applicant for federal funds and permits necessary to construct transportation improvements. UDOT will be responsible for designing, constructing, operating, and maintaining transportation improvements that may result from the Record of Decision (ROD) for this EIS. The Navajo Nation is being represented by Navajo Department of Transportation (Navajo DOT). The Aneth Chapter of the Navajo Nation (Aneth Chapter) has also taken an active role in securing funding to improve the roadway, and will be involved in the NEPA process including, but not limited to, public involvement and alternatives development.

1.1 DESCRIPTION OF PROPOSED ACTION

The original name for this project was State Route (SR-) 262; Montezuma Creek to Aneth. Since the project was originally identified in UDOT's State Transportation Improvement Program (STIP), SR-262 has been renamed and signed SR-162. Due to the difficulty and potential confusion associated with changing the project name and number at this time, the name and number will remain the same. However, this document will refer to all highways by their current route number designation.

FHWA, Navajo DOT, and UDOT are proposing improvements along an 8.5-mile stretch of SR-162 from Montezuma Creek, including the intersection of SR-162 and SR-262, connecting to previous safety improvements to SR-162 just east of Aneth in San Juan County, Utah (**Figure 1.1** Study Area). The focus of the project is to improve overall safety in the study area by improving roadway deficiencies and reducing potential conflicts with pedestrians and grazing animals.

The approximate cost of the improvements has been estimated for the year 2012 using two different pavement reconstruction options. The first option would involve total pavement reconstruction. This entails removing all the existing asphalt and the road base originally placed beneath the asphalt. The roadway is then re-graded and a new road base layer and new asphalt are placed. This option is called pavement reconstruction and would cost approximately $37.1 million.

The second option entails reconstruction as described above in locations where the roadway shifts from the existing alignment and where roadway alignment deficiencies need to be upgraded to meet current American Association of State and Highway Transportation Officials (AASHTO) guidelines. In other areas not reconstructed as above, the existing pavement would be ground up and redistributed over the new pavement width. Then, new asphalt would placed over the redistributed ground up asphalt material. This option is called full depth reclamation and would cost approximately $32.6 million.

The scope of the decision to be made as a result of this DEIS is identifying a transportation solution for the study area. Following is a brief history of the project and a description of the purpose and need for a transportation solution.

1.2 HISTORY

In the early 1990s, safety improvements were constructed along SR-162 from the Utah/Colorado border to approximately 0.5 mile east of Aneth, Utah. At that time, funds to continue improvements west to the intersection with SR-262 were not available, however preliminary plans were developed and an archaeological survey was completed. In 2004, the Aneth Chapter, secured funding to prepare an environmental document to address safety concerns along this segment of SR-162. As a result, FHWA and UDOT have initiated the NEPA EIS process. UDOT's STIP is a 5-year program of highway projects identified in the state of Utah. The State has recognized the need for this project by including it in the STIP.

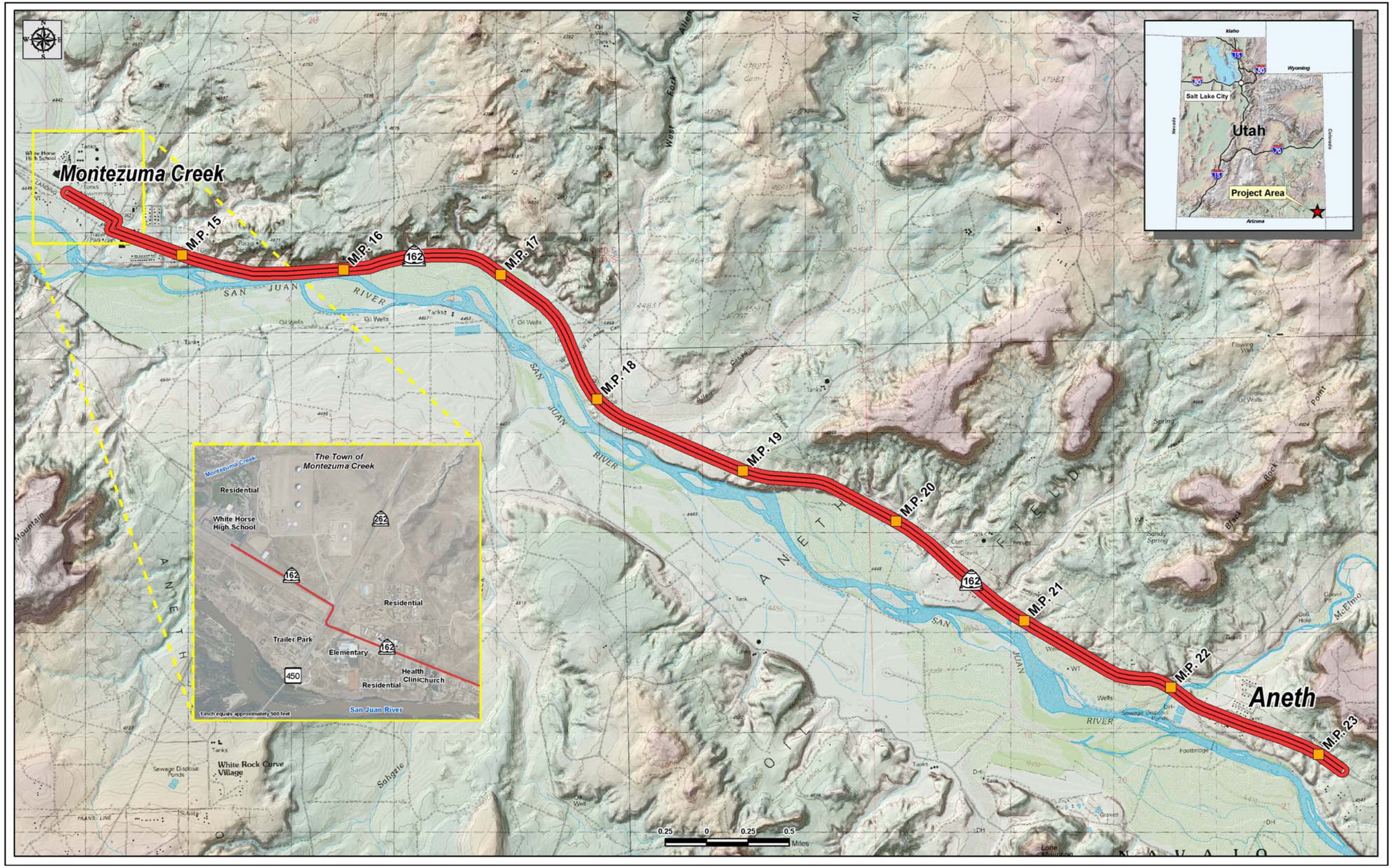

Figure 1.1 - Study Area

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1.2.1 Study Area

SR-162 begins in Bluff, Utah, and runs east to the Colorado state line, generally following the San Juan River. From Bluff to the Colorado state line, SR-162 is designated a Scenic Byway by the Utah State Scenic Byway Committee. Between Montezuma Creek and Aneth, SR-162 is bordered by the bluffs on the north and the San Juan River on the south (refer to **Figure 1.1**). Within Montezuma Creek, a north-south jog connects SR-162 with SR-262 and County Road (CR) 450. SR-262 begins in Montezuma Creek and runs north to the intersection with SR-191. CR 450 begins in Montezuma Creek and runs south to the Arizona state line. The current posted speed on SR-162 ranges from 35 miles per hour (mph) in Montezuma Creek, to 55 mph between Montezuma Creek and Aneth, to 45 mph in Aneth, and back to 55 mph east of Aneth.

The study area for this DEIS includes a 300-foot wide corridor from the end of the previous safety improvements, approximately 0.5 mile west of the intersection of SR-162 and SR-262 in Montezuma Creek, to 0.5 mile east of Aneth. The improvements extend past the intersection with SR-262 to accommodate any potential improvements to that intersection and to provide a safe link to the existing roadway. However, at no point does the study area extend past the south bank of the San Juan River. A 300-foot wide study area was used because the current ROW is approximately 100 feet and it was determined that an additional 100 feet on each side of the ROW would provide enough area to analyze direct impacts that could occur from any of the proposed Build alternatives.

The study area boundaries were established in accordance with and pursuant to federal regulations and FHWA policy on selecting "logical termini" for project limits. FHWA requires that logical termini be selected so that;

1) environmental issues can be treated on a sufficiently broad scope,
2) the project will function properly without requiring additional improvements elsewhere,
3) and the project will not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The logical termini for this project meet these three FHWA requirements.

1.2.2 Related Projects

Listed below are projects within or in close proximity to the study area.

- **McElmo Creek Bridge Replacement Project** - The McElmo Creek bridge replacement project is located immediately west of Aneth, Utah within the SR-262 EIS project corridor. A Categorical Exclusion level of environmental documentation has been approved for the McElmo Creek Bridge Replacement near the turnoff to Hovenweep National Monument. The existing bridge has been substantially scoured and is not wide enough to accommodate standard shoulder widths and intersection acceleration and deceleration lanes. This project is being conducted by UDOT and it is federally funded. It is anticipated that this project will be completed prior to the SR-262 project.

- **Sidewalk Improvement Projects** - In Montezuma Creek, sidewalks will be upgraded between the elementary school and the high school and will include lighting installed by San Juan County. There is also a separate project to install sidewalks in an area of Aneth as well. This project is earmarked to be completed using federal funds from the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).
- **Street Lighting Project** - In Aneth, additional street lighting will be placed between Aneth and the Bureau of Indian Affairs (BIA) School east of Aneth. A portion of this project would fall within the boundaries of the SR-262 EIS (Now reassigned as SR-162) project. This project is also earmarked to be completed using federal funds from SAFETEA-LU.

1.3 NEED FOR THE PROPOSED ACTION

Improvements to SR-162 are needed to address safety concerns resulting primarily from existing deficiencies. This includes, but is not limited to, existing substandard roadway design.

SR-162 provides access to several ancient native peoples' ruins and state and national points of interest, including Hovenweep National Monument, Monument Valley, the San Juan River, and the Four Corners Region. Therefore, the area receives an influx of seasonal traffic, including recreational motor homes and trailers.

In addition to seasonal influxes of traffic along SR-162, school buses make extensive use of SR-162 making stops in Montezuma Creek, Aneth, and several locations in between. Lengthy traffic queues can develop behind the buses when they stop to load or unload passengers. In addition to school buses, open grazing along the corridor contributes to traffic queues while drivers wait for livestock to cross the road. Open grazing also contributes to accidents along the corridor. Finally, there is limited shoulder width for any vehicles to pull over in an emergency or for other needs.

This project is included in the STIP. There are no plans by San Juan County, or the Aneth Chapter that include this project.

Existing Annual Average Daily Traffic (AADT) from 1997 to 2004, provided by UDOT, showed a growth rate of approximately 3.2 percent per year. The year 2006 was projected to have an AADT of 1,030 vehicles per day (vpd). By year 2030, based on traffic models, AADT will be approximately 1,750 vpd, an increase of more than 700 vpd over current.

1.3.1 Safety

Accident data for the period 2000 to 2004 indicates that the 5-year average accident rate for SR-162 is approximately 60 percent lower than expected, but that the accident severity rate is 1.2 times the expected rate. Between 1995 and 2005, there were 35 reported accidents in the study area. It appears from the data that the substandard conditions of the road are contributing in part to the accidents in the area. Six of the 35 accidents, or 17 percent, involved collisions with animals, five of which were domestic (livestock) animals. Eight of the 35 accidents, or 23 percent, involved cars running off the road, five of which resulted in overturned vehicles. The remaining accidents included sideswipes, a head-on collision, and a collision with a parked school bus. The head-on collision, which occurred in July 2000, caused several fatalities. Of the

remaining accidents, four accidents resulted in injuries and four had possible injuries (accident reports did not give enough information for a determination of injury). The 2006 accident data is not yet available; however there was one reported head-on collision in January 2006 that was fatal (UDOT 2006a).

1.3.2 Project Characteristics

Because of the physical and operational characteristics of SR-162, many portions of the highway within the project area do not meet current UDOT standards for vehicle and pedestrian safety. The characteristics contributing to the need for transportation improvements, as documented in the *Existing Conditions Report* (UDOT 2006b) include:

- Insufficient shoulder widths, generally less than two feet, which provide inadequate room for safe stopping or emergency pull-offs, and little room for driver error if the vehicle deviates from the travel lane.
- Insufficient sight distance on six horizontal curves at Mile Posts (MP) 15.4, 16.2, 16.8, 19.5, 21.8, and 22.3, on four hills and dips (vertical curves) at MPs 19.5, 22.1, 22.8, 23.2, and at two intersections at MPs 17.5 and 21.9, all of which reduce the time for drivers to react to obstacles in the roadway (e.g. stopped buses, animals or debris).
- Insufficient clear zones (areas along the roadway that should be free of fixed objects) including fixed roadway signs, culvert inlets and outlets, and steep embankments and steep rock faces immediately adjacent to edge of pavement, providing limited areas for vehicle recovery.
- Insufficient pedestrian facilities, including narrow or nonexistent sidewalks or placement too close to the travel lanes, increasing the potential for vehicle/pedestrian accidents. These will be addressed by the two “earmark” projects.
- Insufficient or incorrectly placed safety barriers, including guard rail and concrete barriers, creating a safety hazard for errant vehicles.
- Inadequate drainage structures, e.g. plugged pipes and culverts, causing water to flow across the highway and creating potential hydroplaning hazards.
- Insufficient bridge width at McElmo Creek, creating an unsafe location for a vehicle to pass another stopped or stalled vehicle. This will be addressed by the McElmo Creek Bridge Replacement Project. The Categorical Exclusion for that project is attached to this document in **Appendix A**.
- Poor pavement condition throughout the highway has resulted in an increased number of areas where potholes develop and roadway edge deterioration occurs.
- Insufficient distance between the intersection of SR-162 / SR-262 and the SR-162 / CR 450 intersection causing driver confusion and the potential for traffic backup into the main travel lanes of SR-162.

Operational characteristics contributing to the need for transportation improvements include:

- Lack of pullouts for school buses, which often block traffic and result in vehicle delays.

- Increased truck traffic along the route that crosses the centerline of the roadway when coming around the curves. This action forces oncoming drivers to hug the side of the road.
- Open grazing of livestock along the roadway, allowing wild and domestic animals to cross or stand on the road.
- Insufficient signing and striping in certain locations, resulting in driver confusion.

1.4 PURPOSE OF THE PROJECT

The purpose of the project is to improve safety for the traveling public along SR-162 (formerly known as SR-262) within the project area. This project will be implemented in a way that respects the traditional and cultural values of the Dine' people. Objectives to measure the extent to which alternatives achieve this purpose include:

- Improving/correcting roadway deficiencies to meet current AASHTO guidelines and UDOT design standards
- Reducing the potential for conflicts between the traveling public, pedestrians and animals
- Addressing the safety concerns of the highway users

Additional objectives for minimizing impacts to the human and natural environmental were identified and will be applied during the alternatives screening process. These include:

- Minimizing impacts to cultural resources
- Balancing open range grazing needs with highway needs
- Minimizing impacts to the environment, including floodplains and wetlands
- Working with the Navajo Nation to ensure compliance with applicable laws and regulations

1.5 CONTEXT SENSITIVE SOLUTIONS/PUBLIC INPUT

FHWA, Navajo DOT, and UDOT have integrated the principals of Context Sensitive Solutions (CSS) into this project. CSS involves open, honest, early, and continuous communication with the interested public with the goal of assuring a project is in harmony with the community and preserves environmental, scenic, aesthetic, historic, and natural resource values of an area. In order to achieve these goals, a tailored public involvement process is developed for each project.

This project utilized CSS to design a public involvement process that involved all interested parties in the public scoping and comment process. CSS was utilized to develop build alternatives that are sensitive to the needs expressed by the communities impacted by this road project, namely Montezuma Creek and Aneth. There are many historic, cultural or paleontological resources located along SR-162 and CSS was used to shape alternatives that are sensitive to those resources. Alternatives considered visual quality and impacts to land use in the project area.

A Notice of Intent (NOI) for the preparation of this EIS was published in the *Federal Register* on February 8, 2006. A copy of the NOI is included in **Appendix B**. An initial public scoping

meeting was held on March 8, 2006 in Aneth, Utah. The purpose of the meeting was to inform the public of the beginning of the EIS process and to obtain public input on transportation issues and potential solutions within the corridor. The following is a summary of the comments received during the meeting:

- Provide wider shoulders, fencing, and other safety improvements
- Design the road to keep the school bus off of the highway while loading and unloading students
- Make the road two lanes in each direction due to the increase of traffic, especially trucks
- Provide a wider road, guardrails, pedestrian/bike ways, bus pull-outs, acceleration/deceleration lanes, safety features
- Design emergency pull-offs
- Install animal fencing along the highway
- Install caution lights near convenience stores to warn drivers of traffic/speed change
- Install flashing stop lights and caution signs at major intersections
- Change the Montezuma Creek intersections junction
- Anticipate safety design changes as our community population increases
- This highway project is a good thing for everybody
- Increase enforcement of posted speeds
- Lessen the curves in the road
- The new road is a great improvement
- Rock in the mesa areas have a tendency to roll off the hills
- A cattle guard is needed near the Montezuma Creek, many cattle and horses cross the roadway during times of drought
- Many of the accidents are due to animals crossing
- An animal underpass along the length of the road would be helpful (concrete types preferred over circular metal)
- Widen the road toward the rock cliffs
- Fix drainage issues
- Avoid the wildlife in the wetlands
- Road maintenance needs to be monitored
- Monitor the roadway striping as it is often ruined by rain and mud
- Semi trucks with three trailers are causing pavements to ripple and are creating unsafe road conditions

- Montezuma Creek intersections need to be changed to a four-way stop
- Bald eagles are in an old tree near Allen Wash and near Montezuma Creek Bridge
- Realign SR-262 south of Montezuma Creek and the San Juan River to avoid impacts to the rock cliffs and the river
- Open Range signs are needed immediately
- Need passing lanes on the road
- Start construction as soon as possible
- If you need to choose between ruins on the rock cliffs and the river, cap the ruins and build the road over the top
- The road is too narrow

These concerns have been taken into account in the development of project alternatives.

1.6 PURPOSE AND NEED SUMMARY

There are numerous physical and operational characteristics contributing to the need for transportation improvements including roadway deficiencies, increasing traffic volumes, animal crossing and increasing accident rates. Based on the baseline information about those deficiencies, as well as public perceptions and opinions, there are existing and projected future transportation problems in the project corridor, and there is a need for transportation improvements to SR-162. The purpose of this project is to design and construct measures necessary to improve roadway conditions on SR-162 for the traveling public.